

## DEATH FEIGNING IN *ANAX JUNIUS* AND *AESCHNA* SP.

BY C. E. ABBOTT,  
Elgin, Illinois.

In reviewing the literature on death feigning of insects, I was unable to find anything relating to this peculiar behavior in dragon-fly larvæ. The Severins have worked with two species of water-bugs, but this, and the work of Holmes on another aquatic Hemipteron, *Ranatra*, are the only references available on this phenomenon in aquatic insects. The theory of Holmes concerning the death feigning of insects is an interesting one. He regards it as an overdeveloped thigmotaxis.

The idea of working with *Anax* and *Aeschna* readily suggested itself because of the ease with which these insects were obtained and the fact that work was being done with them in quite another group of experiments. It was observed that, when the animals were taken from the water and placed on a solid object, they remained motionless, with the cloacal valves closed, and their legs pressed closely against their sides. To put the

### INDIVIDUAL TESTS

Individuals

Trials	I	II	III	IV	V	VI	VII
1.	1 min. 30 sec.	1 min. 45 sec.	no response	2 min. 30 sec.	9 min.	14 min. 30 sec.	17 min.
2.	30 sec.	1 min. 45 sec.	2 min. 45 sec.	4 min. 30 sec.	5 min. 30 sec.	18 min.	9 min. 45 sec.
3.	18 min.	5 min.	5 min.	2 min. 15 sec.	10 min. 45 sec.	7 min. 30 sec.	22 min.
4.	7 min. 45 sec.	13 min. 30 sec.	3 min. 30 sec.	1 min.	4 min.	13 min. 30 sec.	2 min.
5.	2 min.	11 min.	5 min.	2 min.	1 min. 30 sec.	2 min.	3 min.
6.	9 min.	3 min. 30 sec.	12 min. 45 sec.	1 min. 30 sec.	6 min. 10 sec.	3 min.	

Duration of Successive Feints  
Individuals

Trials	A	B	C
1.	2 min. 30 sec.	7 min.	12 in.
2.	1 " "	6 " 30 sec.	11 "
3.	30 "	4 "	1 "
4.	30 "	3 "	2 " 30 sec.
5.	35 "	3 "	
6.		1 "	
7.		15 "	
1.	5 min. 30 sec.	5 min. 30 sec.	9 min. 30 sec.
2.	3 " "	1 " 30 "	4 " "
3.	1 " 30 "	3 " "	13 " "
4.	30 "	1 " "	4 " "
5.		45 "	4 " "
6.		5 " "	2 " "
7.		3 " "	1 " "
8.		2 " "	
9.		2 " "	
10.		1 " "	
1.	2 min.	6 "	6 min. 30 sec.
2.	1 " "	2 "	3 " "
3.	1 " "	1 " "	3 " "
4.	30 sec.	1 " "	1 " "
5.	45 "	45 sec.	1 " "
6.	45 "		30 "
7.	15 "		1 " "
8.	45 "		
9.	45 "		
10.	45 "		

animal back into this condition, it was only necessary to gently stroke its sides. In experimenting, the larvæ were placed on wet sand. One group of tests was made simply to determine the length of individual feints, and another set was made to discover the duration of successive feints.

It thus appears that the duration of individual feints varies a great deal, and that the duration of feints in rapid succession tends to decrease. This is in accord with what is known of the phenomenon in other insects.

I wish to take this opportunity of thanking Dr. W. S. Marshall of the Zoology department for his co-operation and suggestions in this and other experimental work.

## LITERATURE.

Holmes, S. J.

The instinct of feigning death. *Pop. Sci. Mon.* LXXII,  
p. 179. (1908).

Severin, H. H. P. and H. C.

An experimental study of the Death-Feigning of *Belostoma*  
(=*Zaitha* Auct.) *flumineum* Say and *Nepa apiculata*  
Uhler. *Behavior Monog.* I, 20.3, 44 pps., 1 pl. (1911).